

**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XA008NM

Site Name: Meadow

Precipitation or Climate Zone: 9 to 14 inches

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This sub-irrigated site is usually in a bottomland position and may occur adjacent to streams, springs and seeps. Sometimes it is locally known as a cienaga or vega. Slopes are relatively level to 5 percent. Elevation ranges from 6,300 to 8,600 feet above sea level.

Land Form:

1. Valley floor
2. Flood plain
- 3.

Aspect:

1. N/A
- 2.
- 3.

	Minimum	Maximum
Elevation (feet)	6,300	8,600
Slope (percent)	<1	5
Water Table Depth (inches)	28	>72
	Minimum	Maximum
Flooding:		
Frequency	Rare	Rare
Duration	Very brief	Brief
	Minimum	Maximum
Ponding:		
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Medium to high.

CLIMATIC FEATURES

Narrative:

Mean annual precipitation varies from 9 to 14 inches. Deviations of 4 inches or more are quite common. Approximately 60 percent of the precipitation is received during the native plant growth period, April through September. June is the driest month. During July, August and September 4 to 5 inches of precipitation influence the presence and production of warm-season plants. Fall and spring moisture is conducive to the growth of cool-season herbaceous plants. Maximum shrub growth also occurs during this time. Summer precipitation is characterized by brief, localized thunderstorms. Winter moisture usually occurs as snow or light rain.

Mean annual temperature varies from 64 degrees F in July to 21 degrees F in January. The maximum is near 100 degrees F. The minimum is near 40 degrees F. The average last killing frost in the spring is around mid-May. The first killing frost in the fall is late September or early October. The frost-free period is approximately 120 to 140 days, but freezing temperatures have been recorded for every month except July and August. Temperatures are generally conducive for herbaceous plant growth from April through September.

Wind velocities are relatively light most of the year with stronger winds occurring in spring and early summer. These stronger winds, which may exceed 25 miles per hour, increase transpiration rates of plants and rapidly dry the soil surface. Also, small soil particles are often displaced by the stronger winds, which can result in structural damage to native plants, particularly young seedlings.

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	104	119
Freeze-free period (days):	134	145
Mean annual precipitation (inches):	9	14

Monthly moisture (inches) and temperature (⁰F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.52	1.79	7.6	45.6
February	.43	1.56	10.7	50.4
March	.67	1.92	16.8	56.8
April	.52	1.26	22.7	66.0
May	.62	1.26	28.8	75.5
June	.49	1.21	35.1	85.8
July	1.54	3.41	42.1	88.9
August	1.86	3.72	41.8	85.8
September	1.08	1.86	34.6	78.8
October	1.01	1.86	25.3	68.8
November	.71	1.60	16.2	56.0
December	.56	1.49	9.3	47.0

Climate Stations:

Station ID	<u>292241</u>	Location	<u>Cuba, NM</u>	From:	<u>01/01/14</u>	To:	<u>12/31/01</u>
					Period		
Station ID	<u>293422</u>	Location	<u>Gallup FAA AP, NM</u>	From:	<u>01/01/21</u>	To:	<u>12/31/01</u>

INFLUENCING WATER FEATURES**Narrative:**

This may be influenced by water from a stream, spring or seep.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES**Narrative:**

The soils are deep, somewhat poorly to very poorly drained. The seasonal water table fluctuates between 28 and 40 inches for most of the growing season. The surface layers are silty clay loam and clay loam. The substratum is stratified loam, silt loam, silty clay loam, clay loam, very gravelly sand and gravelly sand. Permeability is moderate to moderately slow. Available water-holding capacity is moderate to high. Effective rooting depth is 30 to 60 inches.

Parent Material Kind: Slope alluvium

Parent Material Origin: Mixed - calcareous

Surface Texture:

1. Silty clay loam
2. Clay loam
3. Loam

Surface Texture Modifier:

1. N/A
- 2.

Subsurface Texture Group:	Clayey
Surface Fragments <=3" (% Cover):	N/A
Surface Fragments >3" (% Cover):	N/A
Subsurface Fragments <=3" (%Volume):	N/A
Subsurface Fragments >=3" (%Volume):	15 to 35

	Minimum	Maximum
Drainage Class:	Very poorly	Poorly
Permeability Class:	Moderately slow	Moderate
Depth (inches):	40	>72
Electrical Conductivity (mmhos/cm):	0.00	8.00
Sodium Absorption Ratio:	0.00	5.00
Soil Reaction (1:1 Water):	6.6	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	6	12
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label:** HCPC

Plant Community Narrative: Historic Climax Plant Community

The vegetative aspect on this site is grassland characterized by short and mid-grasses. Some trees and shrubs are scattered about the site, usually on the fringes where the water table is lower. Sedges and rushes are conspicuous. Annual and perennial forbs are present in small amounts.

*Seeps and springs.

Canopy Cover:

Trees, shrubs and half-shrubs	3 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	40
Bare ground	10
Surface gravel	0
Surface cobble and stone	0
Litter (percent)	50
Litter (average depth in cm.)	4

Plant Community Annual Production (by plant type): _____

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	1,275	1,913	2,550
Forb	120	180	240
Tree/Shrub/Vine	60	90	120
Lichen			
Moss			
Microbiotic Crusts			
Total	1,500	2,250	3,000

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	PASM	Western Wheatgrass	450 – 900	450 – 900
2	BRMA4	Mountain Brome	113 – 225	113 – 225
3	POFE	Muttongrass	113 – 225	113 – 225
4	ELTR7	Slender Wheatgrass	113 – 225	113 – 225
5	CAREX JUNCU	Sedges Rushes	225 – 450	225 – 450
6	CAGI3	Giant Sand Reedgrass*	225 – 675	225 - 675
7	2GRAM	Other Grasses	68 – 113	68 - 113

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	TRIFO	Clover spp.	68 – 113	68 – 113
9	ACMI2 GENTI GLLE3 THERM ARAN7	Common Western Yarrow Gentian spp. Wild Licorice Goldenpea spp. Silver Cinquifol	68 – 113	68 – 113

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	CHILOP 2SD	Willow spp. Other Shrubs	0 – 113	0 – 113

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species which usually grow on this site include: water hemlock, tufted hairgrass, red fescue, barnyard grass, dandelion, aster spp., balsamroot, mat muhly, canaigre, iris and geranium.

Plant Growth Curves

Growth Curve ID 0008NM

Growth Curve Name: HCPC

Growth Curve Description: Sub-irrigated short/mid-grassland with a minor component of trees, shrubs and forbs. Sedges and rushes are conspicuous.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats, which support a resident animal community that is characterized by raccoon, golden-mantled ground squirrel, meadow vole, meadowlark, blackbirds, garter snake and leopard frog.

Migrating waterfowl and wading birds use streams and wetlands associated with these sites. Mule deer and elk will move out of adjacent habitats in late winter to feed on early green forage.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations

Soil Series	Hydrologic Group
Bluewater	D
Caruso	C
Concho	C
Knifehill	C
Loveland	C
Nutreeah	C
Poganeab	C
Venzuni	D

Recreational Uses:

No Data

Wood Products:

This site has no significant potential for wood product production.

Other Products:**Grazing:**

Approximately 90 to 95 percent of the vegetation produced on this site come from plants producing forage suitable for grazing or browsing. Due to the high availability of soil moisture, which results in early green up and high productivity, this site is subject to deterioration by overgrazing and trampling. Deterioration is indicated by a decrease in western wheatgrass, tufted hairgrass, brome spp., and bluegrass with an increase in mat muhly, sedges, rushes and forbs. A planned grazing system with periodic deferment is best to maintain the desirable balance between plant species and a high productivity.

Other Information:**Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month**

Similarity Index	Ac/AUM
100 - 76	0.9 – 1.2
75 – 51	1.1 – 1.8
50 – 26	1.6 – 4.8
25 – 0	4.8+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Bluegrass spp.	Poa spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P
Mountain Brome	Bromus marginatus	EP	D	D	P	P	P	P	P	P	P	P	P	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Muttongrass	Poa fendleriana	EP	D	D	D	D	D	D	D	D	D	D	D	D

Animal Kind: Livestock

Animal Type: Horse

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Bluegrass spp.	Poa spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P
Mountain Brome	Bromus marginatus	EP	D	D	P	P	P	P	P	P	P	P	P	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Muttongrass	Poa fendleriana	EP	D	D	D	D	D	D	D	D	D	D	D	D

Animal Kind: Livestock

Animal Type: Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Mountain Brome	Bromus marginatus	EP	D	D	P	P	P	D	D	D	D	D	D	D
Clover spp.	Trifolium spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P
Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

Animal Kind: Wildlife

Animal Type: Elk

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Bluegrass spp.	Poa spp.	EP	P	P	P	P	P	P	P	P	D	D	D	P
Mountain Brome	Bromus marginatus	EP	D	D	P	P	P	P	P	P	P	P	P	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Muttongrass	Poa fendleriana	EP	D	D	D	D	D	D	D	D	D	D	D	D

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: New Mexico

County: Rio Arriba, Taos

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? Yes No

General Legal Description: _____

<u>Relationship to Other Established Classifications:</u>

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley & Sandoval

Characteristic Soils Are:

Bluewater, Caruso, Concho, Cryaquolls	Knifehill, Loveland, Manzano, Nutreeah
Poganeab, Venzuni	
<u>Other Soils included are:</u>	

Site Description Approval:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester		Don Sylvester	

Site Description Revision:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	08/12/02	George Chavez	09/11/02